

CLAIMS

- 1) A building management system comprising a front end device networked to a plurality of controller devices, each controller device being adapted to transmit a configuration data request if not sufficiently configured to perform its appointed role and the front-end device being adapted to respond to such a configuration data request by broadcasting a configuration data response containing the required configuration data to all the controller devices, each broadcast configuration data response including sufficient information to enable each controller device to determine whether to act on or ignore the broadcast configuration data response.
- 2) A building management system according to claim 1, wherein the configuration data responses are IP multicast transmissions, the controller devices all sharing the same IP multicast address.
- 3) A building management system according to claim 1 or 2, wherein each configuration data response includes a controller device identifier identifying the controller device that requires the configuration data, each controller device being adapted to act only on a configuration data response containing its respective controller device identifier.
- 4) A building management system according to any one of claims 1 to 3, wherein each configuration data request includes a controller device identifier identifying the controller device sending the configuration data request, the front end device being adapted to check the controller device identifier in any incoming configuration data request in order to determine the configuration data required.
- 5) A building management system according to any preceding claim, wherein each controller device is adapted to broadcast a configuration data request to all the other controller devices and the front end device, each such configuration data

request including sufficient information to enable each device receiving it to determine whether to act on or ignore the configuration data request.

- 5 6) A building management system according to claim 5, wherein the configuration data requests are IP multicast transmissions, the front end device and controller devices all sharing the same IP multicast address.
- 10 7) A building management system according to claim 5 or 6, wherein each configuration data request and each configuration data response includes a transmission type identifier identifying the transmission type as a request or response, the controller devices being adapted to act only on responses and the front end device being adapted to act only on requests.
- 15 8) A building management system according to any preceding claim, wherein each controller device is adapted to check on power-up whether or not it has sufficient configuration data to perform its appointed role.
- 20 9) A building management system according to any preceding claim, wherein each controller device is adapted to retain, once configured, its configuration data in the event of a restart.
- 25 10) A building management system according to any preceding claim, wherein each controller device is adapted to re-transmit a configuration data request if it has not received an acceptable configuration data response within a predetermined interval.
- 30 11) A method of configuring a building management system comprising a front end device networked to a plurality of controller devices, the method comprising:  
a) programming each controller device to check whether or not it has sufficient configuration data to perform its appointed role and, if not, to transmit a configuration data request; and  
b) programming the front end device to respond to a configuration data request

from a controller device by broadcasting a configuration data response to all the controller devices, each such configuration data response comprising the configuration data required by the controller device that transmitted the configuration data request and sufficient information to enable each controller device to determine whether to act on or ignore the configuration data response.

5

12) A method according to claim 11, comprising programming the front end device to send configuration data responses using an IP multicast address registered or to be registered by the controller devices.

10

13) A method according to claim 11 or 12, comprising programming the front end device to include a controller device identifier identifying the controller device that requires the configuration data in each configuration data response and programming each controller device to act only on a configuration data response comprising its respective controller device identifier.

15

14) A method according to claim 11, 12 or 13, comprising programming each controller device to include in each configuration data request it sends a controller device identifier identifying itself and programming the front end device to check the controller device identifier in any incoming configuration data request in order to determine the configuration data required.

20

15) A method according to any one of claims 11 to 14, comprising programming each controller device to broadcast a configuration data request to all the other controller devices and the front end device, each such configuration data request including sufficient information to enable each device receiving it to determine whether to act on or ignore the configuration data request.

25

16) A method according to claim 15, comprising programming the controller devices to send configuration data requests using an IP multicast address registered or to be registered by all the controller devices and the front end device.

30

18

- 17) A method according to claim 15 or 16, comprising programming the controller devices and front end device to include a transmission type identifier in any configuration data request or configuration data response being sent identifying the transmission type as a request or response and programming the controller devices to act only on responses and the front end device to act only on requests.
- 18) A method according to any one of claims 11 to 17, comprising programming each controller device to check on power up whether or not it has sufficient configuration data to perform its appointed role.
- 19) A method according to any one of claims 11 to 18, comprising programming each controller device to retain, once configured, its configuration data in the event of a restart.
- 20) A method according to any one of claims 11 to 19, comprising programming each controller device to re-transmit a configuration data request if it has not received an acceptable configuration data response within a predetermined interval.
- 21) A building management system, substantially as hereinbefore described with reference to Fig 3 to 5.
- 22) A method of configuring a building management system, substantially as hereinbefore described with reference to Fig 3 to 5.

BEST AVAILABLE COPY